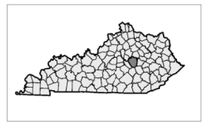
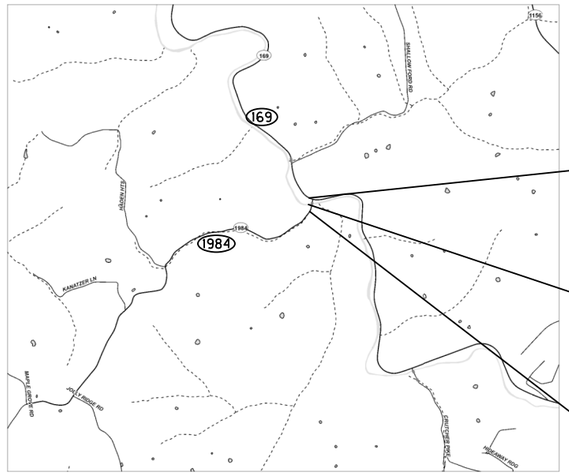
COUNTY OF	ITEM NO.	SHEET NO.
MADISON	7-10001	R1

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

MADISON COUNTY
KY 1984 OVER TATES CREEK
STA. 62+99.47





LOCATION MAP

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

STANDARD DRAWINGS

BBP-003-02	ELASTOMERIC BEARING PADS FOR BOX BEAMS
BDP-001-06	BOX BEAM GENERAL NOTES AND REFERENCES
BDP-002-03	BOX BEAM BEARING DETAILS
BDP-003-03	BOX BEAM MISCELLANEOUS DETAILS
BDP-004-04	BOX BEAM TENSION ROD DETAILS
BDP-010-04	BOX BEAM B33 AND CB33 DETAILS
BGX-006-10	STENCILS FOR STRUCTURES
BGX-012-02	GEOTECHNICAL LEGEND
BHS-011	RAILING SYSTEM SIDE MOUNTED MGS DETAILS
BJE-001-14	ARMORED EDGES
BJE-002	EXPANSION JOINTS
BPS-003-09	HP12x53 STEEL PILE
RBI-001-12	TYPICAL GUARDRAIL INSTALLATIONS
RBI-002-07	TYPICAL GUARDRAIL INSTALLATIONS
RBR-001-13	STEEL BEAM GUARDRAIL ("W" BEAM)
RBR-005-11	GUARDRAIL COMPONENTS
RBR-010-06	GUARDRAIL TERMINAL SECTIONS
RBR-015-06	STEEL GUARDRAIL POSTS
RBR-016-05	TIMBER GUARDRAIL POSTS
RBR-050-08	GUARDRAIL END TREATMENT TYPE 7
RBR-051-01	GUARDRAIL END TREATMENT TYPE 7 ALTERNATE ANCHOR
RBR-055-01	DELINEATORS FOR GUARDRAIL
RDI-040-01	EROSION CONTROL BLANKET SLOPE INSTALLATION
RDX-210-03	TEMPORARY SILT FENCE
RDX-225-01	SILT TRAP TYPE B
RGX-001-06	MISCELLANEOUS STANDARDS
RGX-010-04	TYPICAL EMBANKMENT FOUNDATION BENCHES
RGX-100-07	TREATMENT OF EMBANKMENTS AT END-BENTS
RGX-105-09	TREATMENT OF EMBANKMENTS AT END-BENTS - DETAILS
RGX-200-01	ONE POINT PROCTOR FAMILY OF CURVES

INDEX OF SHEETS

Sheet No.	Description
R1	LAYOUT SHEET
R2	TYPICAL SECTIONS
R3	PLAN SHEET
R4	PROFILE SHEET
S01	GENERAL NOTES
S02	LAYOUT
S03	FOUNDATION LAYOUT
S04	END BENT DETAILS
S05	SUPERSTRUCTURE DETAILS
S06	CONSTRUCTION ELEVATIONS

SPECIAL NOTES

- BRIDGE OVERLAY APPROACH PAVEMENT
- CONCRETE SEALING
- EROSION PREVENTION AND SEDIMENT CONTROL
- TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS
- STRUCTURES WITH OVER THE SIDE DRAINAGE
- CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS
- TREE CLEARING RESTRICTION
- BKY STENCIL
- ADDITIONAL ENVIRONMENTAL COMMITMENTS

SPECIAL PROVISIONS

69 - EMBANKMENT AT END-BENT STRUCTURES

SPECIFICATIONS

Standard Specifications for Road and Bridge Construction, Current Edition.

2017 AASHTO LRFD Bridge Design Specifications with Current Interims.

DESIGN CRITERIA

CLASS OF HIGHWAY: RURAL MINOR COLLECTOR
TYPE OF TERRAIN:
DESIGN SPEED:
REQUIRED NPSD:
REQUIRED PSD:
LEVEL OF SERVICE:
ADT PRESENT (2016): 366
ADT FUTURE ( ):
DHV:
D %:
T %: 7%

GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 46 MINUTES 45 SECONDS NORTH
LONGITUDE 84 DEGREES 23 MINUTES 11 SECONDS WEST

DESIGNED

% RESTRICTED SD:
LEVEL OF SERVICE:
MAX. DISTANCE W/O PASSING:

REV. NO.	SHEETS REVISED	DATE

TABLE OF REVISIONS

EXISTING BRIDGE ID 076B00071N

PREPARED BY
AECOM

BRIDGING KENTUCKY
Restore | Renew | Replace

ROADWAY SHEETS R1-R4	STRUCTURE SHEETS S1-S6
STATE OF KENTUCKY · JORDAN M. TALIAFERRO · 31269 · LICENSED PROFESSIONAL ENGINEER	STATE OF KENTUCKY · SANKET DHATKAR · 34354 · LICENSED PROFESSIONAL ENGINEER
Taliaferro, Jordan — Digitally signed by Taliaferro, Jordan DN: cn=Taliaferro, Jordan, ou=USLVL1 Date: 2020.07.01 10:09:57 -04'00'	Dhatkar, Sanket — Digitally signed by Dhatkar, Sanket DN: cn=Dhatkar, Sanket, ou=USCHG1 Date: 2020.06.30 18:15:47 -05'00'

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF
MADISON

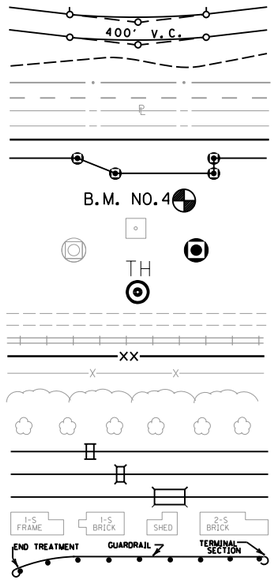
ITEM NO. 7-10001
DRAWING NO. 28126
PROJECT NUMBER:
LETTING DATE: JULY 24, 2020

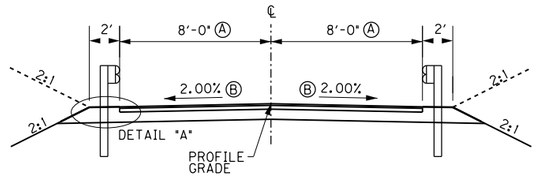
RECOMMENDED BY: _____ PROJECT MANAGER DATE:
PLANS APPROVED BY: _____ STATE HIGHWAY ENGINEER DATE:

COUNTY OF	ITEM NO.	SHEET NO.
MADISON	7-10001	R2

TYPICAL SECTIONS
KY 1984 (MAPLE GROVE ROAD)

CONVENTIONAL SIGNS





ROADWAY NORMAL SECTION
FULL DEPTH CONSTRUCTION
STA. 60+70.00 TO STA. 62+58.47
STA. 63+40.47 TO STA. 64+37.17

VARIABLE DIMENSIONS AND SLOPES

Ⓐ LANE WIDTHS WIDEN FOR RADIUS RETURNS AT INTERSECTION WITH KY 169 (TATES CREEK ROAD).

Ⓑ LANE CROSS SLOPES VARY TO MATCH EXISTING AT TIE IN WITH EXISTING KY 1984 (MAPLE GROVE ROAD). LANE CROSS SLOPES VARY TO MATCH PAVEMENT EDGE GRADE AT INTERSECTION WITH KY 169 (TATES CREEK ROAD).

FULL-DEPTH MAINLINE & SHOULDER PAVEMENT RECONSTRUCTION

TRAFFIC LANES:

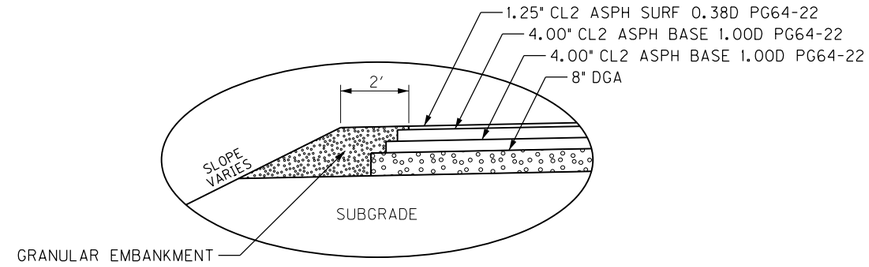
DENSE GRADED AGGREGATE	8" DEPTH
CL2 ASPH BASE 1.00D PG64-22	4" DEPTH
CL2 ASPH BASE 1.00D PG64-22	4" DEPTH
CL2 ASPH SURF 0.38D PG64-22	1.25" DEPTH

SHOULDERS:

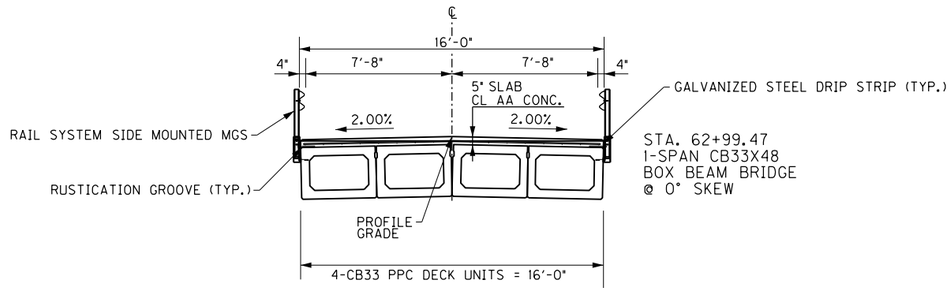
DENSE GRADED AGGREGATE	8" DEPTH
CL2 ASPH BASE 1.00D PG64-22	4" DEPTH
CL2 ASPH BASE 1.00D PG64-22	4" DEPTH
CL2 ASPH SURF 0.38D PG64-22	1.25" DEPTH

NOTES:
DGA BASE OR OTHER GRANULAR MATERIAL APPROVED BY THE ENGINEER NEEDED FOR SHOULDERS OUTSIDE OF PAVED AREA WILL BE MEASURED AND PAID AS GRANULAR EMBANKMENT IN ACCORDANCE WITH THE SPECIAL NOTE FOR BRIDGE OVERLAY APPROACH PAVEMENT.

GRANULAR EMBANKMENT UTILIZED AS FILL: THE SIDE SLOPES SHALL BE CAPPED WITH A MINIMUM OF 6 INCHES OF TOPSOIL STRIPPED FROM THE PROJECT SITE DISTURB LIMITS. THIS APPLICATION SHALL BE INCIDENTAL TO THE PLACEMENT OF GRANULAR EMBANKMENT. EMBANKMENT FOUNDATION BENCHING SHALL BE INCIDENTAL TO PLACEMENT OF GRANULAR EMBANKMENT.



DETAIL "A"
FULL-DEPTH MAINLINE & SHOULDER PAVEMENT RECONSTRUCTION
NOT TO SCALE



BRIDGE NORMAL SECTION
KY 1984 (MAPLE GROVE ROAD)
STA. 62+58.47 TO STA. 63+40.47

NOT TO SCALE

PREPARED BY AECOM

BRIDGING KENTUCKY
Restore | Renew | Replace

KY 1984 (MAPLE GROVE ROAD)
TYPICAL SECTIONS

7–10001 KY–1984 (MAPLE GROVE ROAD) OVER TATES CREEK
BRIDGE #076B00071N

COUNTY OF	ITEM NO.	SHEET NO.
MADISON	7-10001	R3

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION	OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)		
CP 101	5/8" REBAR & CAP	3810314.57	5315259.46	728.93	64+23.90	5.74' RT
CP 102	5/8" REBAR & CAP	3810267.50	5315389.04	728.25	63+72.41	141.85' RT
CP 103	5/8" REBAR & CAP	3810176.76	5315360.76	722.27	62+82.07	112.29' RT

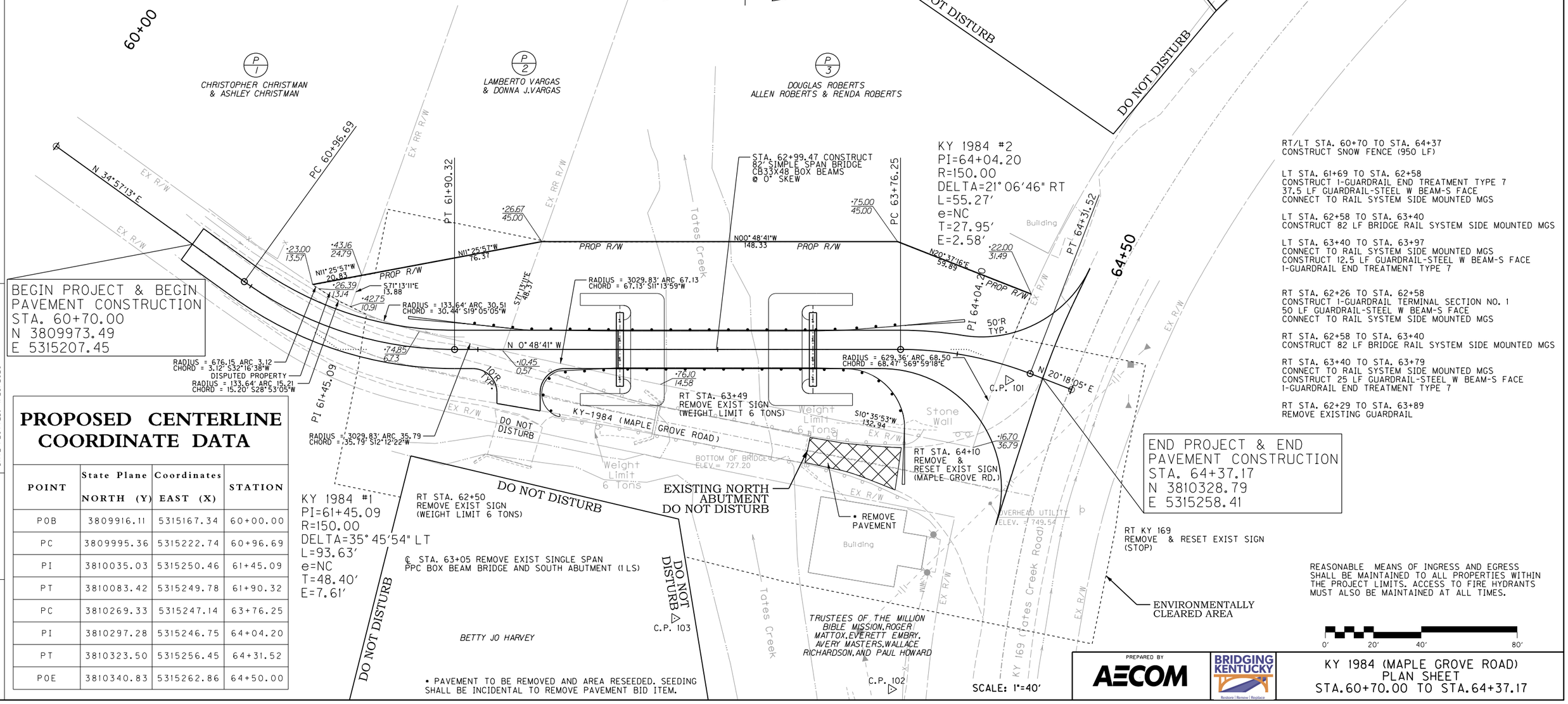
PROJECT COORDINATES
Coordinates for horizontal control were obtained by redundant GPS observations using Carlson BRx6 GNSS receivers on the NAD83 Kentucky State Plane Coordinate System, KY Single Zone, US Survey Feet utilizing the KYCORS RTN GPS Network on January 28, 2019. Coordinates shown are State Plane Coordinates, US Survey Feet. No project datum factor was calculated or used for this project.

BASIS OF ELEVATIONS
Elevations were established by redundant GPS observations using Carlson BRx6 GNSS receivers on the NAVD88 vertical datum, GEOID12B utilizing the KYCORS RTN Network on January 28, 2019 and were adjusted by closed differential level loop based on the elevation of CP 101 = 728.93'.

PARCEL NO.	OWNER(S)	AREA OBTAINED BY	TOTAL AREA OF TRACT		PERMANENT R/W ACQUIRED		EASEMENTS		PORTION REMAINING		SEWER SYSTEM TYPE	SEWER SYSTEM AFFECTED BY PROJECT		BUILDINGS ACQUIRED NUMBER				SOURCE OF TITLE
							PERMANENT	TEMPORARY										
			ACRES	SQ. FT.	ACRES	SQ. FT.	SQ. FT.	SQ. FT.	ACRES	SQ. FT.		YES	NO	C	R	F	S	
1	CHRISTOPHER CHRISTMAN & ASHLEY CHRISTMAN	PVA	36.796		0.003	128.50			36.793		1		X					DB 691 PG 795
2	LAMBERTO VARGAS & DONNA J. VARGAS	PVA	N/A		0.052	2266.95			N/A		5							N/A
3	DOUGLAS ROBERTS, ALLEN ROBERTS & RENDA ROBERTS	PVA	2		0.30	13,227.22			1.70		1		X					DB 705 PG 510

NOTE: PERMANENT R/W ACQUIRED + AREA SEVERED = TOTAL AREA OF TRACT

TYPE SEWER SYSTEM
1. PRIVATE - INDIVIDUAL
2. PRIVATE - MULTI PARTY
3. PUBLIC
4. NONE
5. NOT APPLICABLE



PROPOSED CENTERLINE COORDINATE DATA

POINT	State Plane Coordinates		STATION
	NORTH (Y)	EAST (X)	
POB	3809916.11	5315167.34	60+00.00
PC	3809995.36	5315222.74	60+96.69
PI	3810035.03	5315250.46	61+45.09
PT	3810083.42	5315249.78	61+90.32
PC	3810269.33	5315247.14	63+76.25
PI	3810297.28	5315246.75	64+04.20
PT	3810323.50	5315256.45	64+31.52
POE	3810340.83	5315262.86	64+50.00

• PAVEMENT TO BE REMOVED AND AREA RESEEDED. SEEDING SHALL BE INCIDENTAL TO REMOVE PAVEMENT BID ITEM.

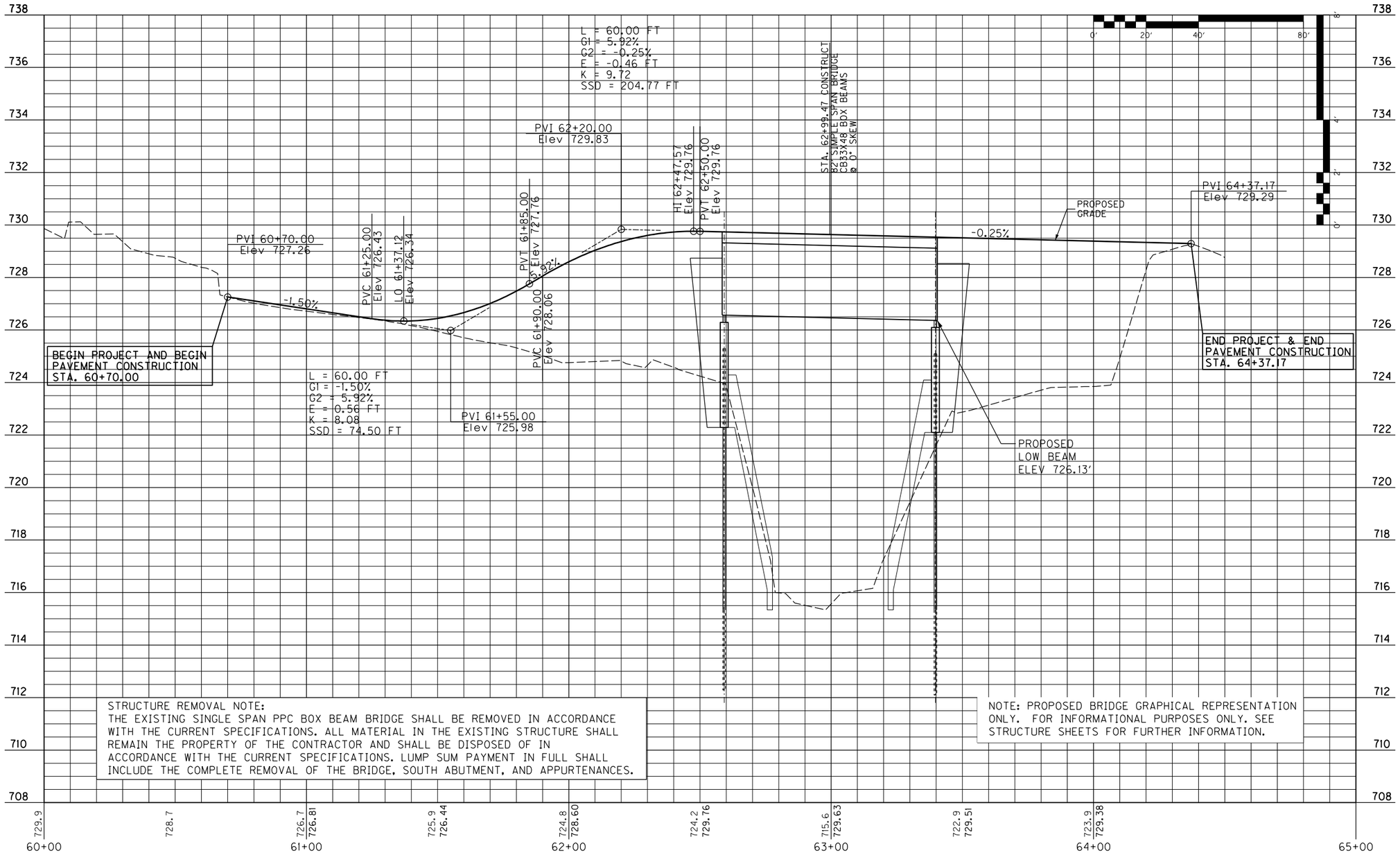
PREPARED BY AECOM

BRIDGING KENTUCKY Restore | Renew | Replace

KY 1984 (MAPLE GROVE ROAD)
PLAN SHEET
STA.60+70.00 TO STA.64+37.17

FILE NAME: ...\Roadway\Design\R003.dgn
USER: darrell.smith
DATE PLOTTED: 4/23/2020
E-SHEET NAME:
MicroStation v8.11.9.867

COUNTY OF	ITEM NO.	SHEET NO.
MADISON	7-10001	R4



STRUCTURE REMOVAL NOTE:
THE EXISTING SINGLE SPAN PPC BOX BEAM BRIDGE SHALL BE REMOVED IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS. ALL MATERIAL IN THE EXISTING STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS. LUMP SUM PAYMENT IN FULL SHALL INCLUDE THE COMPLETE REMOVAL OF THE BRIDGE, SOUTH ABUTMENT, AND APPURTENANCES.

NOTE: PROPOSED BRIDGE GRAPHICAL REPRESENTATION ONLY. FOR INFORMATIONAL PURPOSES ONLY. SEE STRUCTURE SHEETS FOR FURTHER INFORMATION.

SCALE: 1" = 40' HORIZONTAL
1" = 4' VERTICAL

PREPARED BY
AECOM

BRIDGING KENTUCKY
Restore | Renew | Replace

KY 1984 (MAPLE GROVE ROAD)
PROFILE SHEET
STA.60+70.00 TO STA.64+37.17

General Notes

Specifications: References to the specifications are to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction including any current supplemental specifications. All references to the AASHTO specifications are to the AASHTO LRFD Bridge Design Specifications, 8th edition with interims.

Design Load: This bridge is designed for KYHL-93 live load, (i.e. 1.25xAASHTO HL93 live load). This bridge is designed for a future wearing surface of 15 psf.

Design Method: All reinforced concrete members are designed to be equivalent or greater than the load and resistance factor design method as specified in the current AASHTO Specifications.

Materials Design Specifications:

For Class "A" Reinforced Concrete	f'c = 3500 psi
For Class "AA" Reinforced Concrete	f'c = 4000 psi
For Steel Reinforcement	fy = 60000 psi

Material Specifications: AASHTO Specifications or ASTM, current edition, as designated below shall govern the materials furnished.

AASHTO M153	Premolded Cork Filler, Type II
AASHTO M-31	Deformed and Plain Billet-Steel for Concrete Reinforcement, Grade 60

Preformed Cork Expansion Joint Material: Preformed Cork Expansion Joint Material shall conform to subsection 807.04.02 (Type II) of the Kentucky Department of Highways Standard Specifications.

Concrete: Class "AA" Concrete is to be used throughout the superstructure and in the portions of the substructure above the tops of caps. Class "A" concrete is to be used in the substructure below the caps. Prestressed beam concrete shall be in accordance with the plans and specifications.

Reinforcement: Dimensions shown from the face of concrete to bars are to center of bars unless otherwise shown. Spacing of bars is from center to center of bars. Any reinforcing bars designated by suffix "e" in the plans shall be epoxy coated in accordance with section 811.10 of the Standard Specifications. Any reinforcing bars designated by suffix "s" in a Bill of Reinforcement shall be considered a stirrup for purposes of bend diameters.

Construction Identification: The names of the Prime Contractor and the Sub-Contractor shall be imprinted in the concrete with 1 inch letters at a location designated by the engineer. The contractor shall furnish all plans, equipment and labor necessary to do the work for which no direct payment will be made.

Beveled Edges: All exposed edges shall be beveled ¾", unless otherwise shown.

Payment for Precast Concrete Beams: The basis of payment for the Prestressed Concrete Beams shall be at the contract unit price per linear foot of beam, in accordance with the specifications.

Slope Protection: Slope Protection at abutments shall be dry cyclopean stone riprap in accordance with the plans and specifications. Geotextile Fabric, Class I shall be placed between the embankment and the slope protection in accordance with Standard Specifications 214 and 843. Payment for Geotextile Fabric, Class I, shall be considered incidental to the unit price bid for Dry Cyclopean Stone Riprap.

Completion of the Structure: The contractor is required to complete the structure in accordance with the plans and specifications. Material, labor, or construction operations not otherwise specified, are to be included in the bid item most appropriate to the work involved. This may include cofferdams, shoring, excavations, backfilling, removal of all or parts of existing structures, phase construction, incidental materials, labor, or anything else required to complete the structure.

Shop Drawings: The fabricator shall submit all required shop plans, by email to SHOP_076B0007IN@docs.e-Builder.net, for review. These submissions shall depict the shop plans in .PDF format, as either 11"x17" or 22"x36" sheets. Designers will make review comments on these electronic submissions as needed and, if required, shall return them to the fabricator for corrections and resubmittal. Upon acceptable reconciliation of all comments, files shall be sent to the Bridging Kentucky Shop Plan Coordinator for distribution. Only plans submitted directly to the Shop Plan Coordinator will be distributed. Additionally, only plans electronically stamped "Distributed by The Bridging Kentucky Program Team" are to be used for fabrication. While this process does not require the submission of paper copies, the Engineer of Record reserves the right to require such copies on a case by case basis.
When any changes to the design plans are proposed, the shop drawings reflecting these changes shall be submitted through the process above.

Note: The designation in the email 076B0007IN refers to the Bridge ID number which is located on the Title Sheet, R1 of the Bridge Plans. Example: SHOP_076B0007IN@docs.e-Builder.net

Utilities: The contractor shall be responsible for locating any and all existing utilities prior to excavation of material or installation of guardrail or other construction activities that may involve utilities (overhead or underground).

Verifying Field Conditions: The contractor shall field verify all dimensions before ordering material. New material that is unsuitable because of variations in the existing structure shall be replaced at the contractor's expense.

Dimensions: Dimensions are for a normal temperature of 60 degrees fahrenheit. Layout dimensions are horizontal dimensions.

Superstructure Slab: The superstructure slab shall be poured continuously from end to end of slab before the concrete is allowed to set.

Mastic Tape: Mastic Tape used to seal joints is to meet the requirements of ASTM C-877 Type I, II, or III. The joint is to be covered with 12" wide mastic tape. Prior to application, the joint surface shall be clean and free of dirt, debris, or deleterious material. Primer, if required by the tape manufacturer, shall be applied for a minimum width of 9" on each side of the joint.

Mastic Tape shall be either:

EZ-Wrap Rubber by Press-seal Casket Corporation,
Seal Wrap by Mar Mac Manufacturing Co. Inc.,
Cadilloc by The UP Rubber Co. Inc.
or approved equal.

Mastic Tape shall cover the joint continuously unless otherwise shown in the plans. Mastic Tape shall be spliced by taping a minimum of 6" and in accordance with the manufacturer's recommendations with the overlap running downhill.

The cost of labor, materials, and incidental items for furnishing and installing Mastic Tape shall be considered incidental to the unit price bid for concrete class 'AA' and no separate measurement of payment shall be made.

Temporary Supports: Temporary Supports or shoring will not be permitted under the beams when pouring the concrete deck slab or when taking "top of beam" elevations.

Armored Edge: Fabricate armored edge to match cross slope and parabolic crown at each end of bridge.

Elastomeric Bearing Pads: Elastomeric Bearing Pads shall conform to the AASHTO Standard Specifications for Highway Bridges, Division II, Section 18.

Bearings shall be Low Temperature Grade 3 with a shear modulus between 95 psi and 130 psi and shall be subjected to the load testing requirements corresponding to Design Method B. The cost of bearing pads is to be included in the unit price per linear feet for Precast Beams.

Foundation Preparation: Foundation Preparation shall be in accordance with Section 603 of the Specifications.

Foundation excavations should be properly braced/shored to provide adequate safety to persons working in or around excavations. Bracing should be performed in accordance with applicable federal, state and local guidelines.

Temporary shoring, sheeting,cofferdams, and/or dewatering methods may be required to facilitate foundation construction. It should be anticipated that groundwater will be encountered at foundation locations within the flood plain.

Temporary shoring, bracing, sheeting, cofferdams and dewatering shall be included in the Lump Sum Bid for Foundation Preparation.

Structural Granular Backfill: Materials for Structural Granular Backfill shall be in accordance with Section 805 of the Specifications.

Contrary to the Specifications, Structural Granular Backfill will not be measured for payment but shall be included in the Lump Sum Bid for Foundation Preparation.

Concrete Sealer:
Apply concrete sealer in accordance with the Special Note Concrete Sealing.

No Geotechnical Report: This Bridge did not have any drilling performed because rock was noted in the creek.

Piling: Piling shall be driven to practical refusal as defined on the pile record sheet.

Contrary to the standard drawings for steel piling, mill test reports are not required to be notarized.

Pile Points: Provide pile points for all piles. Pile points shall be in accordance with Section 604 of the specifications and of the type shown on the pile record sheet.

Pre-drilling Piles: Where pre-drilling is necessary for pile installation, holes shall be drilled into solid rock. Minimum distance between bottom of cap or pile bent and pile tip shall be 10'-0". Backfill the holes with sand or pea gravel after the pile is placed in the hole. A temporary casing may be required to prevent collapse of the hole. If used, remove the casing as the hole is backfilled. Drive piles to refusal after backfill operations are complete. Include the cost of all materials, labor, and equipment needed to pre-drill, backfill the holes, and drive the piles to refusal in the price per linear foot for "Pre-drilling for Piles".

REVISION	DATE

DATE: 10/25/2019	CHECKED BY
DESIGNED BY: S. DHATKAR	J. JONES
DETAILED BY: S. DHATKAR	J. JONES

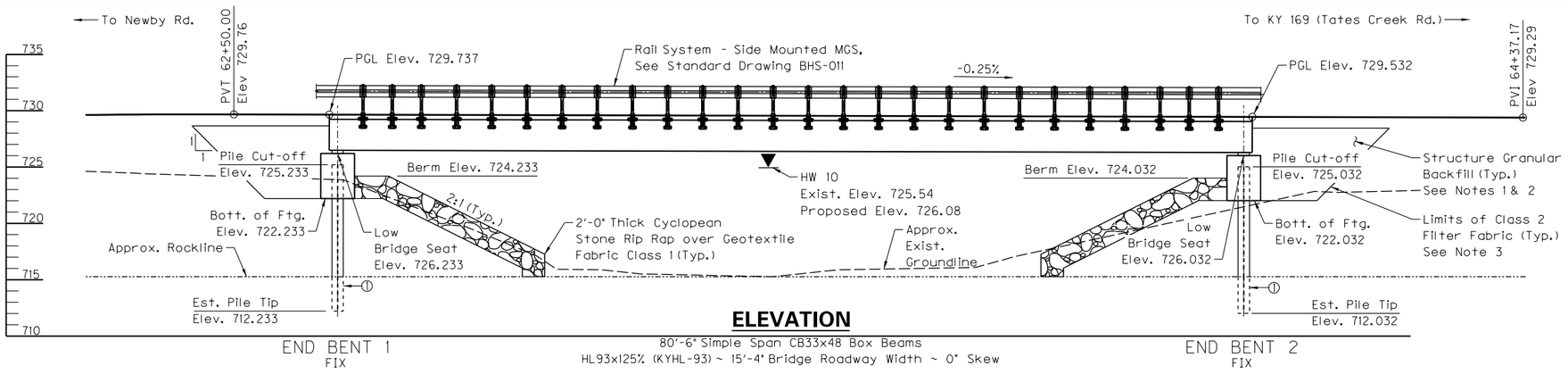
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
MADISON

ROUTE	CROSSING
KY 1984	TATES CREEK

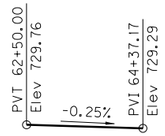
GENERAL NOTES

ITEM NUMBER	PREPARED BY	SHEET NO.
7–10001	AECOM	S01
	BRIDGING KENTUCKY (Restore | Renew | Replace)	DRAWING NO. 28126

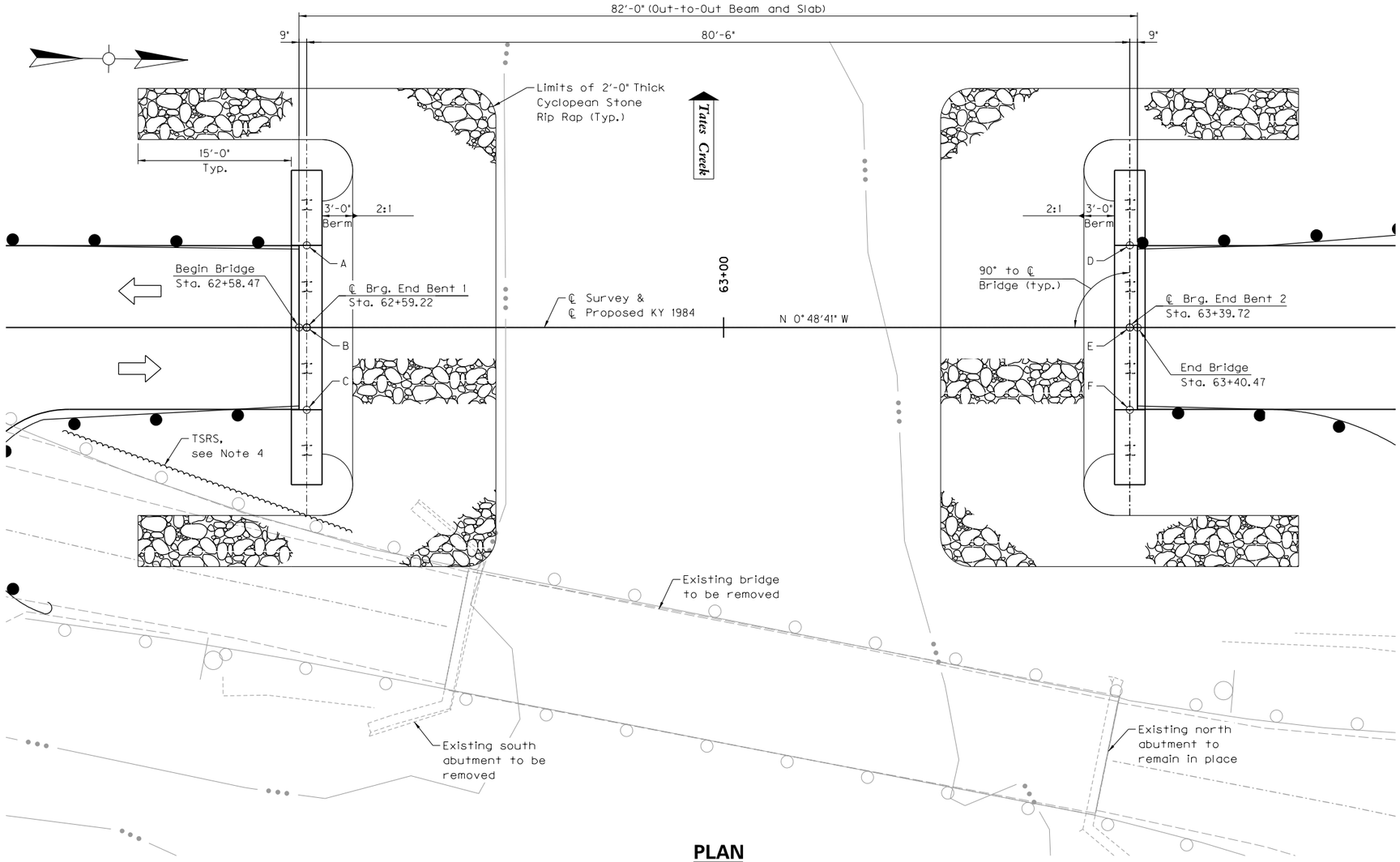


ELEVATION

80'-6" Simple Span CB33x48 Box Beams
HL93x125% (KYHL-93) ~ 15'-4" Bridge Roadway Width ~ 0° Skew



PROFILE GRADE
KY 1984



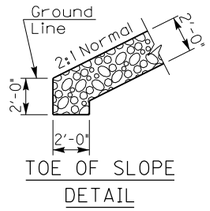
PLAN
~Superstructure Not Shown~

NOTES:

1. Do not backfill behind end bents until after box beams are set and dowels are installed per Std. Dwg. BDP-002-03, grouted, and grout has reached full strength.
2. Structure Granular Backfill approx. quantity = 145 Cu. Yd. For information only. Cost incidental to Foundation Preparation.
3. Class 2 Filter Fabric shall be incidental to Foundation Preparation.
4. TSRS = Temporary Soil Retention System, to be designed by Contractor. Cost incidental to Foundation Preparation.

① Pre-drilling for piles at End Bents. See sheet S01 General Notes.

Bridge Seat Elevations	
A	726.233
B	726.394
C	726.233
D	726.032
E	726.193
F	726.032



TOE OF SLOPE
DETAIL

REVISION	DATE

DATE: 10/25/2019	CHECKED BY
DESIGNED BY: S. DHATKAR	J. JONES
DETAILED BY: S. DHATKAR	J. JONES

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: MADISON

ROUTE: KY 1984 | CROSSING: TATES CREEK

LAYOUT

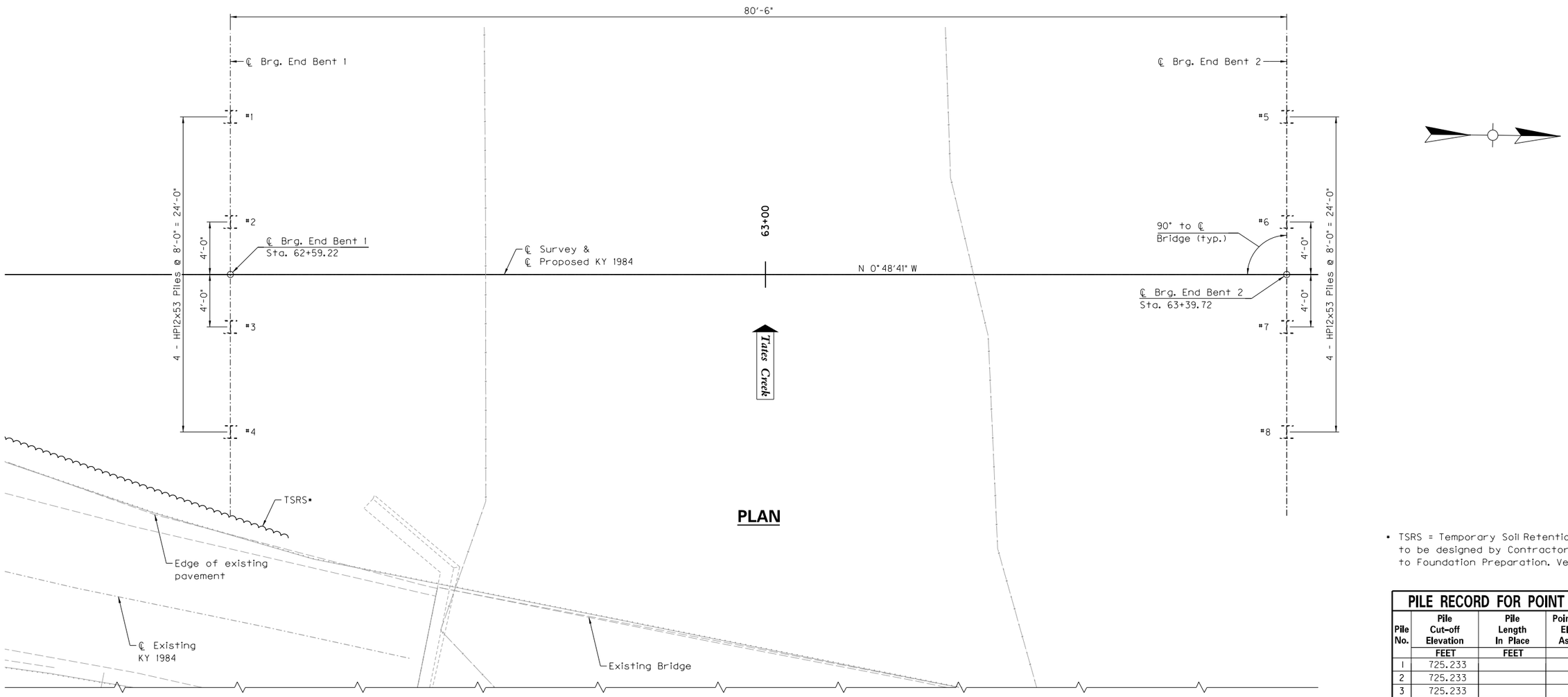
ITEM NUMBER: 7-10001

PREPARED BY: AECOM

BRIDGING KENTUCKY
Restore | Renew | Replace

SHEET NO. S02

DRAWING NO. 28126



PLAN

• TSRS = Temporary Soil Retention System, to be designed by Contractor. Cost incidental to Foundation Preparation. Verify limits in field.

PILE RECORD FOR POINT BEARING PILES

Pile No.	Pile Cut-off Elevation	Pile Length In Place	Point of Pile Elevation As Driven	Design Axial Load
	FEET	FEET	FEET	TONS
1	725.233			93
2	725.233			93
3	725.233			93
4	725.233			93
5	725.032			93
6	725.032			93
7	725.032			93
8	725.032			93

Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.

PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished

DESIGN AXIAL LOAD: Load carried by each pile as estimated from structural design calculations for Factored LRFD Loadings.

CALCULATED FIELD BEARING: Contrary to Section 604.03.07 of the Standard Specifications, in place bearing values are not required for piles bearing on rock when driven to

Driving Criteria

DRIVING CRITERIA: Drive point bearing piles to practical refusal.

PRACTICAL REFUSAL (Case I): Drive point bearing piles to practical refusal. For this project minimum blow requirements are reached after total penetration becomes 1/4" or less for 5 consecutive blows, practical refusal is obtained after the pile is struck an additional 5 blows with total penetration of 1/4 inch or less. Advance the production piling to the driving resistances specified above and to the depths determined by test pile(s) and subsurface data sheet(s). Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

Field Data

For each pile, the Project Engineer shall record the following on this sheet: Pile Length in Place and Point of Pile Elevation as Driven.

Submit this record to:

Kentucky Transportation Cabinet
Director, Division of Structural Design
3rd Floor East
200 Mero Street
Frankfort, KY 40622

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

Use HP 12x53 in accordance with BPS-003, c.e.

Notes

1. A diesel pile driving hammer with a rated energy between 10.5 foot-kips and 20.1 foot-kips will be required to drive 12x53 steel H-piles to practical refusal without encountering excessive blow counts or damaging the piles. The Contractor shall submit the proposed pile driving system to the Engineer for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.
2. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production piles if directed by the Engineer.
3. The installation of the pile foundations should conform to current AASHTO LRFD Bridge Design Specifications, and Section 604 of the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.
4. The Kentucky Transportation Cabinet recommends that protective pile points be used on end bearing piles to allow for embedment into the top of bedrock. Use of reinforced pile points capable of penetrating boulders and hard layers which may be encountered is recommended. Installation of pile points should be in accordance with Section 604 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

REVISION	DATE

DATE: 10/25/2019	CHECKED BY
DESIGNED BY: S. DHATKAR	J. JONES
DETAILED BY: S. DHATKAR	J. JONES

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
MADISON

ROUTE	CROSSING
KY 1984	TATES CREEK

FOUNDATION LAYOUT

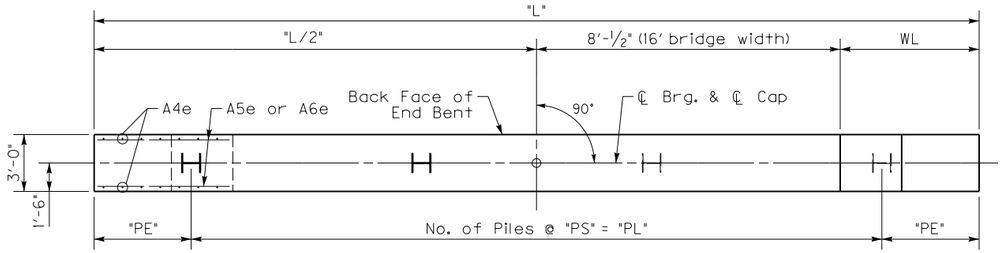
ITEM NUMBER	PREPARED BY	SHEET NO.
7-10001	AECOM	S03
	BRIDGING KENTUCKY Restore | Renew | Replace	DRAWING NO. 28126

FILE NAME: ...\Drawing\S03 Foundation Layout
USER: sanket.dhatkar
DATE PLOTTED: 8/21/2019 12:58:34 PM
E-SHEET NAME:
MicroStation v8.11.9.459

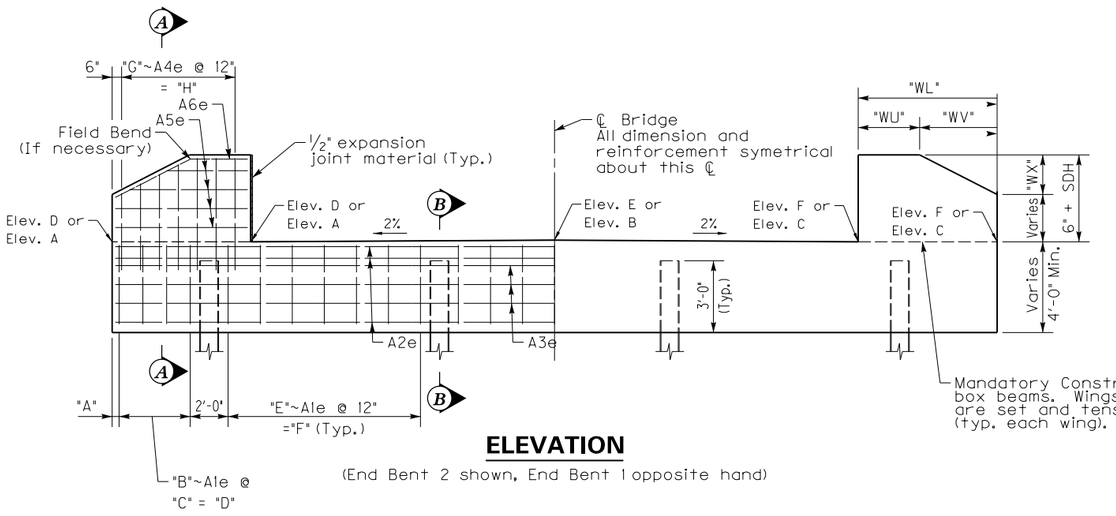
SUPERSTRUCTURE HEIGHT SDH = Beam+Pad Height +(haunch+slab) [if applicable]		CAP BILL OF REINFORCEMENT 16'-0" BRIDGE WIDTH					WING BILL OF REINFORCEMENT				
		MARK	TYPE	NO.	SIZE	LENGTH	MARK	TYPE	NO.	SIZE	LENGTH
H3	35"<SDH≤50"	A1e	14s	29	5	13'-6"	A4e	Str.	28	5	5'-9"
		A2e	Str.	9	8	30'-5"	A5e	Str.	16	5	7'-0"
		A3e	Str.	6	5	30'-5"	A6e	Str.	4	6	7'-5"

BRIDGE WIDTH	PILE LOAD		PILES				DIMENSIONS												
	SIZE	TONS	NO.	PE	PS	PL	A	B	C	D	E	F	G	H	J	L	WL	WU	WV	WX
16	H3	93	4	3'-4½"	8'-0"	24'-0"	4½"	4	8"	2'-0"	7	6'-0"	7	6'-0"	4	30'-9"	7'-4"	3'-3"	4'-1"	2'-1"

NOTE:
SDH = 40.69" for this sheet.

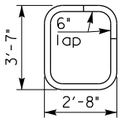


PLAN



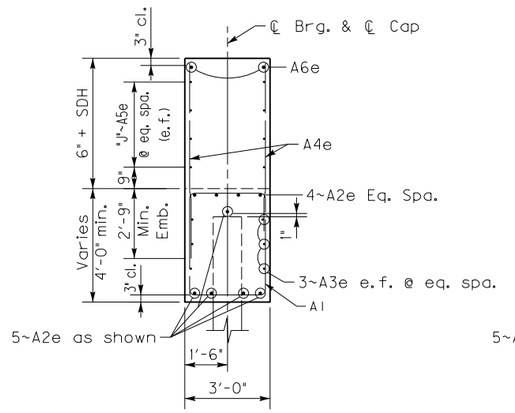
ELEVATION

(End Bent 2 shown, End Bent 1 opposite hand)

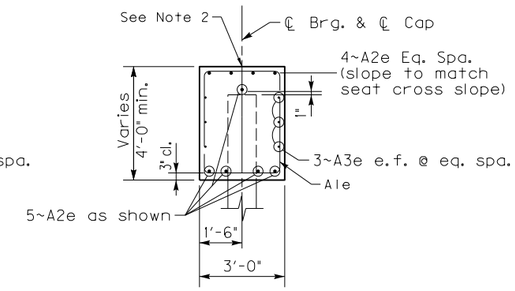


A1e Bar
~Size #5~

NOTES:
1) Conform to KYTC, Standard Specifications, Current Edition.
2) Concrete to be Class "A", 3500 psi.
3) Rebar to be epoxy coated A615, Grade 60.
4) Maintain 2" clear cover to reinforcement unless otherwise noted.
5) End Bents are designed for the maximum span of the following concrete beams as shown in the current standards:
   H3 - CB33.
6) Piles should be HP12x53.
7) Pile load given is Factored Strength Load.
8) Piles must be driven 10' into existing ground below pile cap. Pre drilling into rock will be required. Drive piles to refusal.
9) Contractor shall provide a hammer capable of driving the piling to refusal or capacity without encountering excessive blow counts or damaging the pile. Contractor shall be responsible for all damaged piling.



SECTION A–A



SECTION B–B

NOTES:

1. See Sheet S02 for Bridge Seat Elevations.
2. Bridge Seat Elevations are provided at ℄ of bearings.
3. Slope cap as necessary with side by side box beams to maintain proper roadway slope.

REVISION	DATE
DATE: 10/25/2019	CHECKED BY
DESIGNED BY: S. DHATKAR	J. JONES
DETAILED BY: S. DHATKAR	J. JONES

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: **MADISON**

ROUTE: **KY 1984** | CROSSING: **TATES CREEK**

END BENT DETAILS

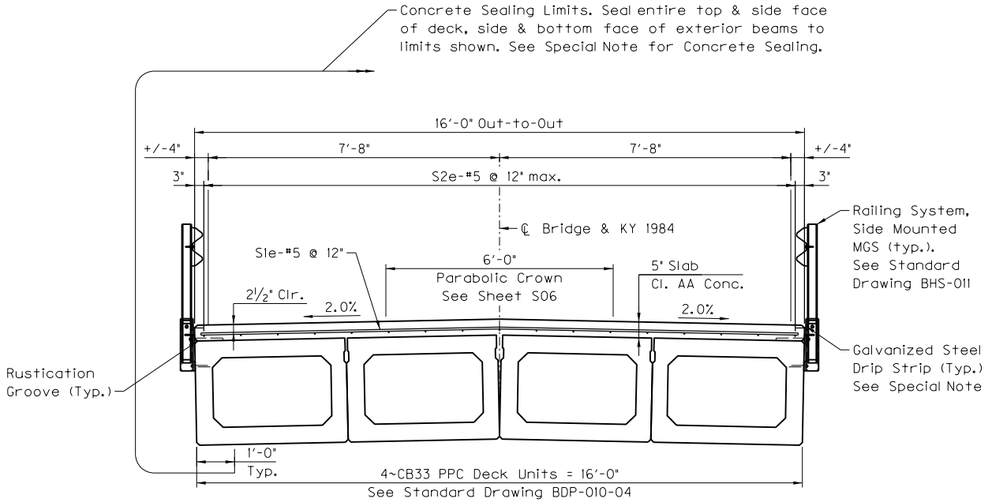
ITEM NUMBER: **7-10001**

PREPARED BY: AECOM

BRIDGING KENTUCKY — Restore | Renew | Replace

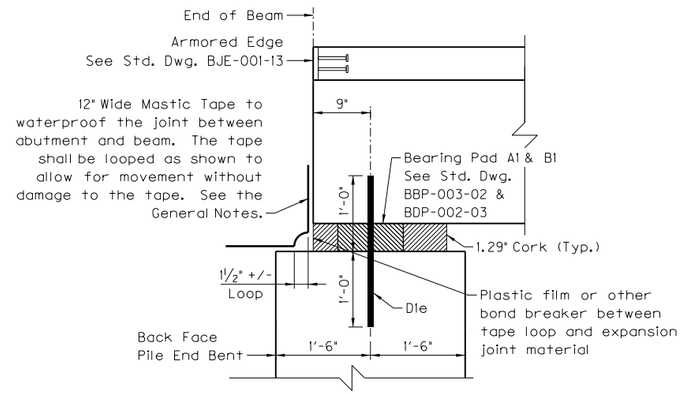
SHEET NO.: S04

DRAWING NO.: **28126**

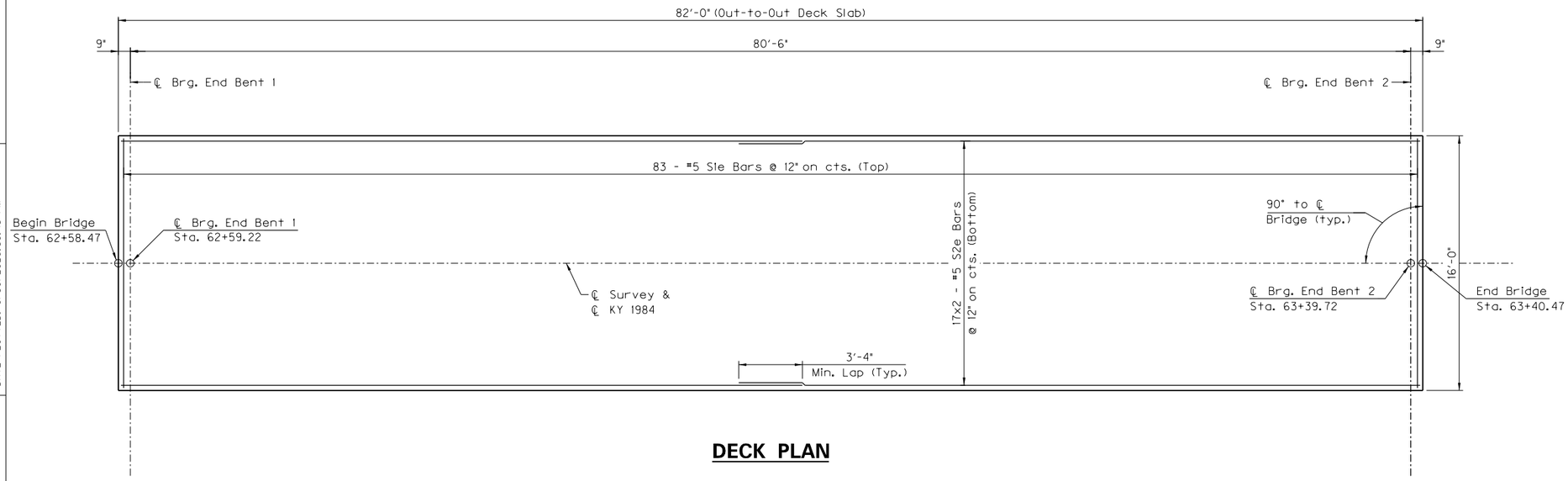


Note: All slab reinforcement to be epoxy coated

TYPICAL SECTION



JOINT WATERPROOFING DETAIL



DECK PLAN

BILL OF REINFORCEMENT SUPERSTRUCTURE

MARK	TYPE	SIZE	NO.	LENGTH
S1e	Str.	#5	83	15'-8"
S2e	Str.	#5	34	42'-6"
D1e	Str.	#8	16	2'-0"

REVISION	DATE

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DETAILED BY: S. DHATKAR	J. JONES

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY: MADISON

ROUTE: KY 1984 | CROSSING: TATES CREEK

SUPERSTRUCTURE DETAILS

ITEM NUMBER: 7-10001

PREPARED BY: AECOM

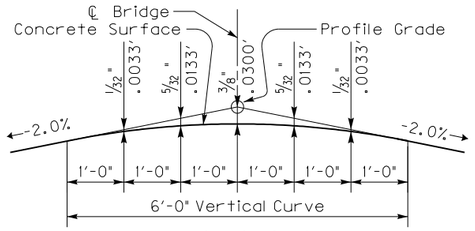
BRIDGING KENTUCKY — Restore | Renew | Replace

SHEET NO. S05

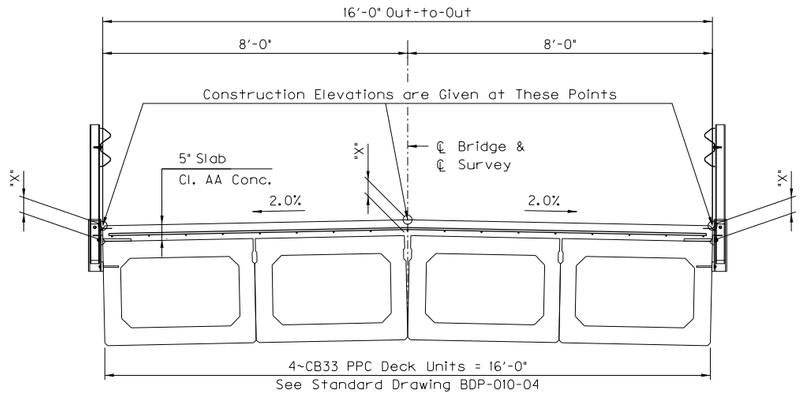
DRAWING NO. 28126

CONSTRUCTION ELEVATIONS

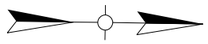
LOCATION	LEFT FASCIA			CENTERLINE BRIDGE			RIGHT FASCIA		
	CONST. ELEV.	TOP OF BEAM	DIM. "X"	CONST. ELEV.	TOP OF BEAM	DIM. "X"	CONST. ELEV.	TOP OF BEAM	DIM. "X"
Begin Bridge	729.577			729.737			729.577		
℄ Brg. E.B. #1	729.575			729.735			729.575		
1 - 1	729.573			729.733			729.573		
2 - 2	729.567			729.727			729.567		
3 - 3	729.557			729.717			729.557		
4 - 4	729.542			729.702			729.542		
5 - 5	729.524			729.684			729.524		
6 - 6	729.502			729.662			729.502		
7 - 7	729.477			729.637			729.477		
8 - 8	729.447			729.607			729.447		
9 - 9	729.413			729.573			729.413		
℄ Brg. E.B. #2	729.374			729.534			729.374		
End Bridge	729.372			729.532			729.372		

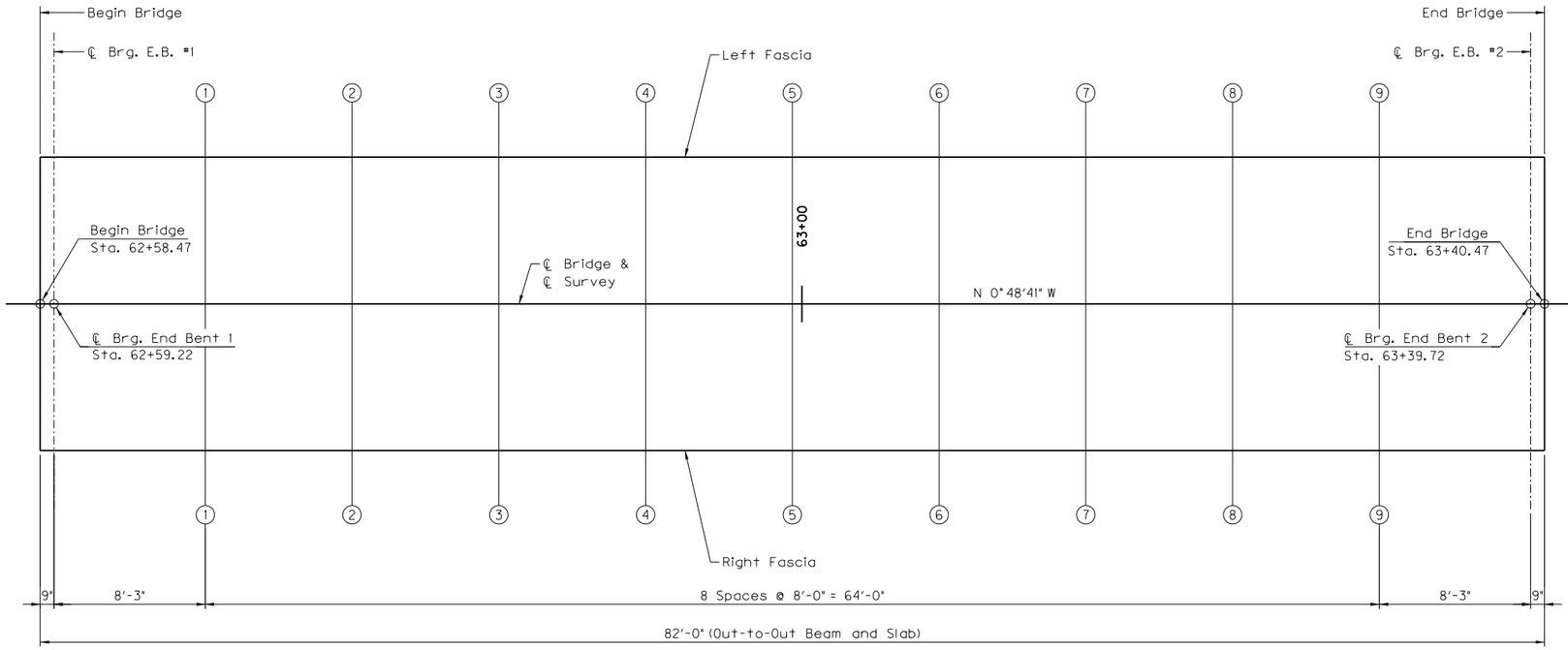


PARABOLIC CROWN



TYPICAL SECTION





PLAN

NOTES FOR ELEVATIONS TAKEN ON PRESTRESSED CONCRETE BOX BEAMS

Take elevations on top of beam at points indicated after the beams have been laterally tensioned and grouted. The beam elevations are to be read to three decimal places and entered in tables under "Top of Beam" elevations.

Compute dimension "X" as follows: "Construction Elevation" minus "Top of Beam" elevation equals dimension "X". Construction Elevations include camber due to weight of the concrete slab and barrier. Measuring of dimension "X" gives the final check on beam tolerances for camber, beam damage, and errors in erection that produce reverse cambers, sags, and unsightly fascia beams.

The minimum allowable dimension "X" or slab thickness is 5" (0.4167') If any computed dimension "X" is outside limits, adjustments need to be made to the dimensions "X" on one or more grid lines at the discretion of the Engineer.

For setting templates, measure dimension "X" above top of beams for top of template. Do not set template by elevations.

Temporary supports or shoring will not be permitted under the girders when pouring the concrete floor slab or when taking "Top of Beam" elevations.

REVISION	DATE

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DETAILED BY: S. DHATKAR	J. JONES

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

COUNTY
MADISON

ROUTE	CROSSING
KY 1984	TATES CREEK

CONSTRUCTION ELEVATIONS

ITEM NUMBER	PREPARED BY		SHEET NO.
7-10001	AECOM	BRIDGING KENTUCKY Restore | Renew | Replace	S06
			DRAWING NO. 28126